



OIPE

RAW SEQUENCE LISTING

DATE: 07/31/2002

PATENT APPLICATION: US/10/059,271

TIME: 14:51:18

Input Set : A:\Albre-22.app

Output Set: N:\CRF3\07312002\J059271.raw

p.6

ENTERED

4 <110> APPLICANT: REPKE, HEINRICH
 5 BUDDE, ECKHARD
 6 NICOLAUS, STEFAN
 8 <120> TITLE OF INVENTION: PROTEIN HAVING MULTIPLE ANTIGEN/EPITOPE SEQUENCES AND
 9 BEING IMMOBILIZED
 11 <130> FILE REFERENCE: ALBRE-22
 13 <140> CURRENT APPLICATION NUMBER: 10/059,271
 14 <141> CURRENT FILING DATE: 2002-01-31
 16 <150> PRIOR APPLICATION NUMBER: DE 101 06 295
 17 <151> PRIOR FILING DATE: 2001-02-02
 19 <160> NUMBER OF SEQ ID NOS: 97
 21 <170> SOFTWARE: PatentIn Ver. 2.1
 23 <210> SEQ ID NO: 1
 24 <211> LENGTH: 17
 25 <212> TYPE: PRT
 26 <213> ORGANISM: Artificial Sequence
 28 <220> FEATURE:
 29 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 30 peptide
 32 <220> FEATURE:
 33 <221> NAME/KEY: MOD_RES
 34 <222> LOCATION: (4)..(5)
 35 <223> OTHER INFORMATION: Any amino acid
 37 <220> FEATURE:
 38 <221> NAME/KEY: MOD_RES
 39 <222> LOCATION: (7)
 40 <223> OTHER INFORMATION: Any amino acid
 42 <220> FEATURE:
 43 <221> NAME/KEY: MOD_RES
 44 <222> LOCATION: (10)
 45 <223> OTHER INFORMATION: Any amino acid
 47 <220> FEATURE:
 48 <221> NAME/KEY: MOD_RES
 49 <222> LOCATION: (13)..(14)
 50 <223> OTHER INFORMATION: Any amino acid
 52 <400> SEQUENCE: 1
 53 Gly Lys Arg Xaa Xaa Lys Xaa Arg Lys Xaa Lys Arg Xaa Xaa Arg Arg
 54 1 5 10 15
 56 Gly
 59 <210> SEQ ID NO: 2
 60 <211> LENGTH: 19
 61 <212> TYPE: PRT
 62 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING

DATE: 07/31/2002

PATENT APPLICATION: US/10/059,271

TIME: 14:51:18

Input Set : A:\Albre-22.app

Output Set: N:\CRF3\07312002\J059271.raw

```

64 <220> FEATURE:
65 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
66     peptide
68 <220> FEATURE:
69 <221> NAME/KEY: MOD_RES
70 <222> LOCATION: (2)
71 <223> OTHER INFORMATION: Any amino acid
73 <220> FEATURE:
74 <221> NAME/KEY: MOD_RES
75 <222> LOCATION: (5)
76 <223> OTHER INFORMATION: Any amino acid
78 <220> FEATURE:
79 <221> NAME/KEY: MOD_RES
80 <222> LOCATION: (8)
81 <223> OTHER INFORMATION: Any amino acid
83 <220> FEATURE:
84 <221> NAME/KEY: MOD_RES
85 <222> LOCATION: (12)
86 <223> OTHER INFORMATION: Any amino acid
88 <220> FEATURE:
89 <221> NAME/KEY: MOD_RES
90 <222> LOCATION: (15)
91 <223> OTHER INFORMATION: Any amino acid
93 <220> FEATURE:
94 <221> NAME/KEY: MOD_RES
95 <222> LOCATION: (18)
96 <223> OTHER INFORMATION: Any amino acid
98 <400> SEQUENCE: 2
Wt-> 99 Gly Xaa Lys Lys Xaa Arg Arg Xaa Lys Gly Lys Xaa Arg Arg Xaa Lys
100     1             5             10             15
Wt-> 102 Lys Xaa Gly
105 <210> SEQ ID NO: 3
106 <211> LENGTH: 22
107 <212> TYPE: PRT
108 <213> ORGANISM: Artificial Sequence
110 <220> FEATURE:
111 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
112     peptide
114 <220> FEATURE:
115 <221> NAME/KEY: MOD_RES
116 <222> LOCATION: (2)
117 <223> OTHER INFORMATION: Any amino acid
119 <220> FEATURE:
120 <221> NAME/KEY: MOD_RES
121 <222> LOCATION: (4)
122 <223> OTHER INFORMATION: Any amino acid
124 <220> FEATURE:
125 <221> NAME/KEY: MOD_RES
126 <222> LOCATION: (6)

```

RAW SEQUENCE LISTING

DATE: 07/31/2002

PATENT APPLICATION: US/10/059,271

TIME: 14:51:18

Input Set : A:\Albre-22.app

Output Set: N:\CRF3\07312002\J059271.raw

127 <223> OTHER INFORMATION: Any amino acid
 129 <220> FEATURE:
 130 <221> NAME/KEY: MOD_RES
 131 <222> LOCATION: (8)
 132 <223> OTHER INFORMATION: Any amino acid
 134 <220> FEATURE:
 135 <221> NAME/KEY: MOD_RES
 136 <222> LOCATION: (12)
 137 <223> OTHER INFORMATION: Asp or Glu
 139 <220> FEATURE:
 140 <221> NAME/KEY: MOD_RES
 141 <222> LOCATION: (16)
 142 <223> OTHER INFORMATION: Any amino acid
 144 <220> FEATURE:
 145 <221> NAME/KEY: MOD_RES
 146 <222> LOCATION: (18)..(19)
 147 <223> OTHER INFORMATION: Any amino acid
 149 <220> FEATURE:
 150 <221> NAME/KEY: MOD_RES
 151 <222> LOCATION: (21)
 152 <223> OTHER INFORMATION: Any amino acid
 154 <400> SEQUENCE: 3
 N--> 155 Gly Xaa Cys Xaa Lys Xaa Arg Xaa Lys Arg Lys Xaa Lys Arg Lys Xaa
 156 1 5 10 15
 N--> 158 Lys Xaa Xaa Cys Xaa Gly
 159 20
 162 <210> SEQ ID NO: 4
 163 <211> LENGTH: 20
 164 <212> TYPE: PRT
 165 <213> ORGANISM: Artificial Sequence
 167 <220> FEATURE:
 168 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 169 peptide
 171 <220> FEATURE:
 172 <221> NAME/KEY: MOD_RES
 173 <222> LOCATION: (4)..(5)
 174 <223> OTHER INFORMATION: Any amino acid
 176 <220> FEATURE:
 177 <221> NAME/KEY: MOD_RES
 178 <222> LOCATION: (7)
 179 <223> OTHER INFORMATION: Any amino acid
 181 <220> FEATURE:
 182 <221> NAME/KEY: MOD_RES
 183 <222> LOCATION: (11)..(13)
 184 <223> OTHER INFORMATION: Any amino acid
 186 <400> SEQUENCE: 4
 N--> 187 Gly Val Ala Xaa Xaa Lys Xaa Lys Arg Arg Xaa Xaa Xaa Arg Glu Lys
 188 1 5 10 15
 190 Arg Ala Val Gly

RAW SEQUENCE LISTING

DATE: 07/31/2002

PATENT APPLICATION: US/10/059,271

TIME: 14:51:18

Input Set : A:\Albre-22.app

Output Set: N:\CRF3\07312002\J059271.raw

```

191          20
194 <210> SEQ ID NO: 5
195 <211> LENGTH: 22
196 <212> TYPE: PRT
197 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
201     peptide
203 <400> SEQUENCE: 5
204 Trp Ile Gln Leu Gln Gln Arg Leu Asn Leu Trp Gly Cys Arg Gly Lys
205   1          5          10          15
207 Leu Ile Cys Tyr Thr Asn
208          20
211 <210> SEQ ID NO: 6
212 <211> LENGTH: 22
213 <212> TYPE: PRT
214 <213> ORGANISM: Artificial Sequence
216 <220> FEATURE:
217 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
218     peptide
220 <400> SEQUENCE: 6
221 Trp Ile Gln Asn Gln Gln Leu Leu Asn Leu Trp Gly Cys Lys Gly Arg
222   1          5          10          15
224 Leu Val Cys Tyr Thr Asn
225          20
228 <210> SEQ ID NO: 7
229 <211> LENGTH: 22
230 <212> TYPE: PRT
231 <213> ORGANISM: Artificial Sequence
233 <220> FEATURE:
234 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
235     peptide
237 <400> SEQUENCE: 7
238 Trp Leu Gln Asn Gln Gln Ile Leu Asn Leu Trp Gly Cys Lys Gly Arg
239   1          5          10          15
241 Leu Ile Cys Tyr Thr Asn
242          20
245 <210> SEQ ID NO: 8
246 <211> LENGTH: 22
247 <212> TYPE: PRT
248 <213> ORGANISM: Artificial Sequence
250 <220> FEATURE:
251 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
252     peptide
254 <400> SEQUENCE: 8
255 Trp Leu Gln Ser Gln Gln Leu Leu Ser Asn Trp Gly Cys Arg Gly Lys
256   1          5          10          15
258 Leu Val Cys Tyr Thr Asn
259          20

```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/059,271

DATE: 07/31/2002
TIME: 14:51:18

Input Set : A:\Albre-22.app
Output Set: N:\CRF3\07312002\J059271.raw

262 <210> SEQ ID NO: 9
263 <211> LENGTH: 24
264 <212> TYPE: PRT
265 <213> ORGANISM: Artificial Sequence
267 <220> FEATURE:
268 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
269 peptide
271 <400> SEQUENCE: 9
272 Ala Ile Glu Arg Tyr Leu Gln Asp Gln Ala Arg Leu Asn Ser Trp Gly
273 1 5 10 15
275 Cys Thr Phe Arg Gln Val Cys His
276 20
279 <210> SEQ ID NO: 10
280 <211> LENGTH: 24
281 <212> TYPE: PRT
282 <213> ORGANISM: Artificial Sequence
284 <220> FEATURE:
285 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
286 peptide
288 <400> SEQUENCE: 10
289 Ala Met Glu Lys Tyr Leu Arg Asp Gln Ala Ile Val Asn Ser Trp Gly
290 1 5 10 15
292 Cys Ala Phe Arg Gln Val Cys Tyr
293 20
296 <210> SEQ ID NO: 11
297 <211> LENGTH: 24
298 <212> TYPE: PRT
299 <213> ORGANISM: Artificial Sequence
301 <220> FEATURE:
302 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
303 peptide
305 <400> SEQUENCE: 11
306 Ala Met Glu Lys Tyr Leu Lys Asp Gln Ala Arg Leu Asn Ser Trp Gly
307 1 5 10 15
309 Cys Ala Phe Arg Gln Val Cys His
310 20
313 <210> SEQ ID NO: 12
314 <211> LENGTH: 24
315 <212> TYPE: PRT
316 <213> ORGANISM: Artificial Sequence
318 <220> FEATURE:
319 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
320 peptide
322 <400> SEQUENCE: 12
323 Ala Ile Glu Lys Tyr Leu Lys His Gln Ala Gln Leu Asn Ala Trp Gly
324 1 5 10 15
326 Cys Ala Phe Arg Gln Val Cys His
327 20
330 <210> SEQ ID NO: 13

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/059,271

DATE: 07/31/2002
TIME: 14:51:19

Input Set : A:\Albre-22.app
Output Set: N:\CRF3\07312002\J059271.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 4,5,7,10,13,14
Seq#:2; Xaa Pos. 2,5,8,12,15,18
Seq#:3; Xaa Pos. 2,4,6,8,12,16,18,19,21
Seq#:4; Xaa Pos. 4,5,7,11,12,13
Seq#:86; Xaa Pos. 136,137,139,142,145,146,151,153,155,157,161,165,167,168
Seq#:86; Xaa Pos. 170,290,293,296,300,303,306,309,311,313,315,319,323,325
Seq#:86; Xaa Pos. 326,328,407,408,410,413,416,417,422,425,428,432,435,438
Seq#:86; Xaa Pos. 441,443,445,447,451,455,457,458,460,592,593,595,598,601
Seq#:86; Xaa Pos. 602,607,610,613,617,620,623,626,628,630,632,636,640,642
Seq#:86; Xaa Pos. 643,645
Seq#:88; Xaa Pos. 65,66,68,71,74,75,80,83,86,90,93,96,99,101,103,105,109
Seq#:88; Xaa Pos. 113,115,116,118,290,291,293,296,299,300,305,308,311,315
Seq#:88; Xaa Pos. 318,321,324,326,328,330,334,338,340,341,343,404,405,407
Seq#:88; Xaa Pos. 410,413,414,419,422,425,429,432,435,438,440,442,444,448
Seq#:88; Xaa Pos. 452,454,455,457,614,615,617,620,623,624,629,632,635,639
Seq#:88; Xaa Pos. 642,645,648,650,652,654,658,662,664,665,667,771,772,774
Seq#:88; Xaa Pos. 777,780,781,786,789,792,796,799,802,805,807,809,811,815
Seq#:88; Xaa Pos. 819,821,822,824
Seq#:90; Xaa Pos. 35,36,38,41,44,45,50,53,56,60,63,66,69,71,73,75,79,83,85
Seq#:90; Xaa Pos. 86,88,162,163,165,168,171,172,177,180,183,187,190,193,196
Seq#:90; Xaa Pos. 198,200,202,206,210,212,213,215,260,261,263,266,269,270
Seq#:90; Xaa Pos. 275,278,281,285,288,291,294,296,298,300,304,308,310,311
Seq#:90; Xaa Pos. 313,355,356,358,361,364,365,370,373,376,380,383,386,389
Seq#:90; Xaa Pos. 391,393,395,399,403,405,406,408
Seq#:92; Xaa Pos. 226,227,229,232,235,236,241,244,247,251,254,257,260,262
Seq#:92; Xaa Pos. 264,266,270,274,276,277,279,523,524,526,529,532,533,538
Seq#:92; Xaa Pos. 541,544,548,551,554,557,559,561,563,567,571,573,574,576
Seq#:92; Xaa Pos. 1335,1336,1338,1341,1344,1345,1350,1353,1356,1360,1363
Seq#:92; Xaa Pos. 1366,1369,1371,1373,1375,1379,1383,1385,1386,1388,1845
Seq#:92; Xaa Pos. 1846,1848,1851,1854,1855,1860,1863,1866,1870,1873,1876
Seq#:92; Xaa Pos. 1879,1881,1883,1885,1889,1893,1895,1896,1898,2498,2499
Seq#:92; Xaa Pos. 2501,2504,2507,2508,2513,2516,2519,2523,2526,2529,2532
Seq#:92; Xaa Pos. 2534,2536,2538,2542,2546,2548,2549,2551
Seq#:94; Xaa Pos. 12,13,15,18,21,22,27,30,33,37,40,43,384,385,387,390,393
Seq#:94; Xaa Pos. 394,399,402,405,409,412,415,418,420,422,424,428,432,434
Seq#:94; Xaa Pos. 435,437,721,722,724,727,730,731,736,739,742,746,749,752
Seq#:94; Xaa Pos. 755,757,759,761,765,769,771,772,774,1052,1053,1055,1058
Seq#:94; Xaa Pos. 1061,1062,1067,1069,1071,1073,1077,1081,1083,1084,1086
Seq#:96; Xaa Pos. 73,74,76,79,82,83,88,91,94,98,101,104,107,109,111,113,117
Seq#:96; Xaa Pos. 121,123,124,126,238,239,241,244,247,248,253,256,259,263
Seq#:96; Xaa Pos. 266,269,272,274,276,278,282,286,288,289,291,373,374,376
Seq#:96; Xaa Pos. 379,382,383,388,391,394,398,401,404,407,409,411,413,417
Seq#:96; Xaa Pos. 421,423,424,426